AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): ~~A~~ An isolated Bridging Integrator-2 (Bin2) protein having the amino acid sequence of SEQ ID NO: 2 ~~or a fragment thereof~~.

Claims 2-27 (Canceled).

Claim 28 (Currently amended): The Bin2 ~~peptide or~~ protein according to claim 1 selected from the group consisting of:

~~(a) a fragment of Bin2 comprising at least 8 amino acids in length, wherein any of said fragments comprising the sequence of amino acids 23 to 35 of SEQ ID NO: 2 comprise at least 14 amino acids in length; and any fragments comprising the sequence of amino acids 138 to 155 of SEQ ID NO: 2 comprise at least 19 amino acids in length;~~

~~(b)~~(a) an analog or homolog of SEQ ID NO: 2; ~~and~~

~~(c)~~(b) a fusion protein comprising the amino acid sequence of (a) ~~or (b)~~ and a fusion partner; and

~~(d) a deletion protein comprising the amino acid sequence of SEQ ID NO: 2 with one to twenty amino acids deleted therefrom~~.

(c) a fusion protein comprising the amino acid sequence of SEQ ID NO: 2 and a fusion partner.

Claim 29 (Currently amended): ~~The~~ An isolated Bridging Integrator-2 (Bin2) peptide ~~or protein according to claim 28, wherein the fragment of Bin2 has~~ having the sequence of amino acids 1 to 221 of SEQ ID NO: 2.

Claim 30 (Canceled).

Claim 31 (Currently amended): ~~The~~ An isolated Bridging Integrator-2 (Bin2) peptide ~~or protein according to claim 28~~, wherein said peptide is ~~at least~~ 8 to 13 amino acids in length and ~~comprising~~comprises a sequence of contiguous amino acids selected from within the sequence of amino acids 1 to 13 of SEQ ID NO: 2.

Claim 32 (Currently amended): The Bin2 ~~peptide or~~ protein according to claim 28, wherein the fusion partner is selected from the group consisting of glutationine-S-transferase, β-galactosidase, poly-histidine and maltose binding protein.

Claims 33-42 (Canceled).

Claim 43 (Withdrawn): A method for specifically diagnosing cancers associated with inappropriate expression of Bin1 comprising the steps of:

contacting a sample from a human or animal to be diagnosed with the Bin2 protein of claim 1, whereby in the presence of Bin1 in the sample, a complex is formed between Bin1 and the Bin2 protein or reagent, and

analyzing for the presence or quantity of said complex.

Claims 44-48 (Canceled).

Claim 49 (Withdrawn): A method of diagnosing cancer or hyperplastic disease characterized by inappropriate levels of functional Bin1 levels in a human or an animal, said method comprising the steps of:

contacting a Bin2 protein according to claim 1 with a sample from a human or animal to be diagnosed, whereby in the presence of Bin1, a detectable complex is formed with the Bin2 protein;

analyzing for the presence or absence of said complex; and

comparing the level of complex to a standard, wherein the absence of said detectable label indicates the absence of or decreased levels of functional Bin1.

Claims 50-51 (Canceled).

Claim 52 (Currently amended): A composition comprising an effective amount of ~~a~~ the Bin2 protein of claim 1 and a pharmaceutically acceptable carrier.

Claims 53-56 (Canceled).